

# Texas Commission on Environmental Quality

## CHECKLIST WORKSHEET

### IHW BOILER AND INDUSTRIAL FURNACE (BIF)

Reg Ent Name : \_\_\_\_\_

Date : \_\_\_\_\_

Add ID \_\_\_\_\_

Investigator Name \_\_\_\_\_

Item No.	Description	Answer	Citations	Notes
	SECTION A: REQUIRED INFORMATION			
1	BIF regulations became effective after May 22, 1991. In addition to updating the TCEQ Notice of Registration (TCEQ Form 0002) for existing or new BIF unit, has owner/operator also notified EPA (EPA Form 8700-12/ 3010)?		335.6(c)	
2	Was the certificate of pre-compliance (COP) establishing limits of emission and operating parameters submitted by August 21, 1991?		266.103(b) 335.224(4)	
2A	If needed, was certificate of pre-compliance revised to reflect operating conditions?			
3	Was the certificate of pre-compliance document, which may include dispersion modeling results, complete and accurate?		335.224(4) 266.103(b)	
4	Was the initial certificate of compliance (COC) for an existing BIF unit submitted by August 21, 1992?		266.103(c) 335.224(6)	
5	For an interim status non-permitted BIF unit, has owner/ operator revised the certification of compliance (COC) within three years from the previous date of certification or recertification?		335.224(8) 335.224(11)	
6	If not, was an extension obtained for COC? Referencing 266.103(c)(7)(ii).		335.221(a)(11)	
6A	Has owner/operator received approval of extension from the IHW Permits Section, Waste Permits Division of the Commission in Austin?			
7	Was the COC test document complete and accurate in establishing operating parameter limits?		335.224(6) 266.103(c)	
8	Does the investigation report provide relevant information for the BIF operation?			
8A	Is compliance test summary, EPA Form CC5, or the BIF permit section reviewed and referenced in the report?			
8B	Which BIF Tier screening level is used (Tier I, Tier II, Tier III, Adjusted Tier I ) to establish limits for the ten metals, hydrogen chloride, and chlorine?			
8C	Is BIF process flow diagram reviewed and included in the report?			
	SECTION B: GENERAL INFORMATION			
1	Has the facility submitted a revised Part B permit application addressing BIF operation and compliance test conditions?			

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2	For a permitted facility (See Authorized Units and Operations Section), check the frequency of sampling and testing for BIF units. Has owner operator completed the latest Stack Test for air emission parameters as scheduled?			
3	Does the facility have permits for Air Emissions from BIF unit(s)?			
	SECTION C: INCORPORATED FACILITY STANDARDS			
1	According to permitted or interim facility standards for Burners a BIF facility is also subject to Part 265/264 standards. Exceptions listed under 335.221(a)(8)&(2) are addressed in 335.224(a)(3) (A)-(F), for interim status units, and 335.223, for permitted units. Has the facility revised the Part B permit application (deadline February 22, 1992) to meet these standards?		266.103(a)(2) 266.103(a)(4)	
2	Using the CEI Permitted /Interim Facility Checklist, is owner/operator meeting the General Facility Standards of 265/264 Subpart B for a BIF facility?		265.17	
3	Using the CEI Permitted /Interim Facility Checklist, is owner/operator meeting the Preparedness and Prevention requirements of 265/264 Subpart C for a BIF facility?		265.37 265.31 264.37 264.31	
4	Using the CEI Permitted /Interim Facility Checklist, is owner/operator meeting the Contingency Plan and Emergency Procedures of 265/264 Subpart D for a BIF facility?		264.51 264.56 265.51 265.56	
5	Using the CEI Permitted /Interim Facility Checklist, is owner/operator meeting the Manifest System, Recordkeeping & Reporting of 265/264 Subpart E for a BIF facility?		264.71 264.77 265.71 265.77	
6	Using the CEI Permitted /Interim Facility Checklist, for permitted units only, is owner/operator meeting the Corrective Action requirements of 264 Subpart F for a BIF facility?		264.101 264.90	
7	Using the CEI Permitted /Interim Facility Checklist, is owner/operator meeting the Closure and Post-Closure requirements of 265/264 Subpart G for a BIF facility?		264.111 264.115 265.111 265.115	
8	Using the CEI Permitted /Interim Facility Checklist, is owner/operator meeting the Financial Requirements of 265/264 Subpart H for a BIF facility?		265.141 265.147 265.148 265.149 265.150	
9	If air emission standards specified under Subpart BB apply [265.1050(e)/264.1050(f)], complete the Subpart BB Checklist, as scheduled.			

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**IHW BOILER AND INDUSTRIAL FURNACE (BIF) (Cont)**

10	If air emission standards specified under Subpart CC apply [265.1083(c)(1)/264.1080 (c)(1)], complete the Subpart CC Checklist, as scheduled.			
	<b>SECTION D: ANALYSIS AND FEED RATE MONITORING</b>			
1	Does the Certificate of Compliance (Form CC-5) or Permit specify operating limits for authorized composite waste streams?			
1A	Is the facility burning waste within the operating limits designated in the Certificate of Compliance or Permit for total hazardous waste?		266.102(e)(3) 266.102(e)(4) 266.103(c)(1)(i) 335.221(a)(11) 335.221(a)(6)	
1B	Is the facility burning waste within the operating limits for pumpable hazardous waste? (N/A for Tier 1 and adjusted Tier.		266.103(c)(1)(i) 266.102(e)(4) 335.221(a)(11) 335.221(a)(6)	
1C	Is the facility burning waste within the operating limits for hazardous metals in total feed streams? (applicable for Tier 1, adjusted Tier 1 metals, and Tier III metals)		266.102(e)(4) 266.103(c)(1)(ii) 335.221(a)(11) 335.221(a)(6)	
1D	Is the facility burning waste within the operating limits for chlorine and chloride?		266.102(e)(5) 266.103(c)(1)(iii) 335.221(a)(11) 335.221(a)(6)	
1E	Is the facility burning waste within the operating limits for ash?		266.102(e)(3) 266.103(c)(1)(iv) 335.221(a)(11) 335.221(a)(6)	
1F	Is the facility burning waste within the operating limits for carbon monoxide concentration, and where required, hydrocarbon concentration in stack gas?		266.102(e)(2)(ii) 266.103(c)(1)(v) 335.221(a)(11) 335.221(a)(6)	
1G	Is the facility burning waste within the operating limits for maximum production rate when producing normal product?		266.102(e)(5)(ii)(D) 266.103(c)(1)(vi) 335.221(a)(11) 335.221(a)(6)	
1H	Is the facility burning waste within the operating limits for maximum combustion chamber temperature? (N/A for Tier 1 and adjusted Tier 1)		266.102(e)(4)(ii)(E) 266.102(e)(4)(iii)(E) 335.221(a)(11) 335.221(a)(6) 266.103(c)(1)(xii)	
1I	Is the facility burning waste within the operating limits for minimum combustion chamber temperature?		266.102(e)(2)(E) 266.103(g)(1) 335.221(a)(13) 335.221(a)(6)	

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**IHW BOILER AND INDUSTRIAL FURNACE (BIF) (Cont)**

1J	Is the facility burning waste within the operating limits for maximum flue gas temperature entering a particulate matter (PM) control device?		335.221(a)(6) 266.102(e)(4)(ii)(F) 266.102(e)(4)(iii)(F) 266.103(c)(1)(xiii) 335.221(a)(11)	
2	Indicate whether the Air Pollution Control Device is a scrubber, particulate matter filter, or other device.			
2A	Is the facility burning waste within the operating limits for parameters for Air Pollution Control Devices?		266.103(c)(1)(ix) 266.103(c)(1)(xi) 266.103(c)(1)(xii) 266.103(c)(1)(xiii) 335.221(a)(11)	
3	Are any of the hazardous wastes which are burned listed for dioxin, or derived from any of the following dioxin-listed wastes: FO20, F021, F022, F023, F026 or F027? (Note: Prohibition on burning Dioxin-Listed Wastes during Interim Status; applicable only to Interim Status).		266.103(a)(3) 335.221(a)(7)	
4	Is hazardous waste being fed into the BIF only when operating conditions (temperature, feed rate, etc.) in the Certificate of Compliance or Permit are being met?		266.102(e)(7)(iii) 266.103(i) 335.214 335.214(a) 335.214(b) 335.221(a)(6)	
5	Does the facility have a waste analysis plan that specifies procedures for collecting hazardous waste fuel to determine its physical and chemical characteristics? (Note: Check that all feed streams to the BIF unit are referenced in the Waste Analysis Plan) referencing 265.13(b); referencing 264.13(b).		266.102(a)(2)(ii) 266.103(a)(4)(ii) 335.221(a)(2) 335.221(a)(8)	
6	Is the facility analyzing the feed streams to obtain as-fed concentrations of metals, chlorides and ash in accordance with their waste analysis plan? Feed rate limits for metals, chlorides, and ash must be established and monitored by knowing the concentration of the substance (i.e., metals, chlorides and ash) in each feed stream and the flow rate of each feed stream referencing 265.13(b); referencing 264.13(b).		266.103(a)(4)(ii) 266.102(a)(2)(ii) 335.221(a)(2) 335.221(a)(8)	
7	Does the facility blend the waste after analysis, or add filler materials, e.g. sawdust, which could impact concentrations?			
7A	If yes, how is this accounted for in the determination of actual metals, chlorides and ash concentrations?			
8	If the facility has elected to comply with a 24-hour average for lead, arsenic, cadmium, chromium, or beryllium, is the feed rate of each metal at any time always less than ten times the feed rate that would be allowed on an hourly rolling average basis?		266.102(e)(6)(ii)(A) 266.103(c)(4)(iv)(C) 335.221(a)(11) 335.221(a)(6)	

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**IHW BOILER AND INDUSTRIAL FURNACE (BIF) (Cont)**

9	Does the unit always operate within the conditions of operation specified in the Certification of Compliance or the Permit before the waste is fed into the unit? (except waste that is fed solely as an ingredient under the Tier I or adjusted Tier I).		266.102(e)(7)(ii)(C) 266.103(f) 335.221(a)(12) 335.221(a)(6)	
10	Does the facility retain analysis or documentation to show that hazardous waste with a heating value less than 5000 Btu/lb was not fed to the unit during precompliance (unless it was fed as an ingredient, or for the purpose of testing not to exceed 720 hours). Blending to augment the heating value to 5000 Btu/lb except by bonafide treatment is prohibited. Therefore, the facility must document that all wastes entering a blend tank meet this provision.		266.103(a)(6) 335.221(a)(9)	
11	Interim status units only: Is the facility meeting the following special requirements for Industrial Furnaces that feed hazardous wastes for a purpose other than solely as an ingredient at any location other than the hot end?			
11A	Is the waste fed at a location where the combustion gas temperatures are at least 1800 F?		266.103(a)(5)(i)(A) 335.221(a)(9)	
11B	Does the facility maintain documentation to show that enough oxygen is present to combust the organic constituents in the waste?		266.103(a)(5)(i)(B) 335.221(a)(9)	
11C	For cement kiln systems, is the hazardous waste fed to the kiln itself, rather than precalciners / preheaters?		266.103(a)(5)(i)(C) 335.221(a)(9)	
11D	Does the unit comply with the hydrocarbon controls of 266.104(c), or 266.103(c)(5), upon certification of compliance under 266.103(c) irrespective of the CO level achieved during the compliance test?		266.103(a)(5)(i)(D) 335.221(a)(9)	
12	Interim status unit only: Is the facility compliant with the following limitations when burning hazardous waste solely as an ingredient?			
12A	Does the waste contain less than a total of 500 ppm of nonmetal compounds listed in Appendix VIII as-fired?		266.103(a)(5)(ii)(A) 335.221(a)(9)	
12B	Does the waste have a value less than 5000 Btu/lb as-fired?		266.103(a)(5)(ii)(B) 335.221(a)(9)	
	SECTION E: FUGITIVE EMISSIONS			
1	Does the Regulated Entity control fugitive emissions by keeping the combustion zone totally sealed, maintaining combustion zone pressure lower than atmospheric, or an alternate means?		266.102(e)(7)(i) 266.102(e)(7)(i)(A) 266.102(e)(7)(i)(B) 266.102(e)(7)(i)(C) 266.103(h) 335.221(a)(14) 335.221(a)(6) 266.102(e)(4)(iii)(F)	
2	Have fugitive emissions data been recorded by the Regulated Entity? Referencing 264.73(b)(5).		266.103(j)(4) 335.221(a)(14)	

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**IHW BOILER AND INDUSTRIAL FURNACE (BIF) (Cont)**

			335.221(a)(2) 266.102(a)(2)(v)	
	SECTION F: OPERATION OF AUTOMATIC HAZARDOUS WASTE FEED CUT OFF SYSTEM			
1	Is BIF equipped with a functional waste feed cutoff system to operate when conditions deviate from those established in the certificate of compliance or the permit?		266.102(e)(7)(ii) 266.103(g) 335.221(a)(13) 335.221(a)(6)	
2	Is the minimum combustion chamber temperature that occurred during the compliance test or set in the permit maintained after the waste feed cutoff as long as hazardous waste residues remain in the unit?		266.102(e)(7)(ii)(A) 266.103(g)(1) 335.221(a)(13) 335.221(a)(6)	
3	Does the Regulated Entity continue to monitor the operating parameters in the compliance certification or in the permit after the waste feed cutoff, and is the hazardous waste feed not re-started until parameters are back within the limit?		266.102(e)(7)(ii)(C) 266.103(g)(2) 335.221(a)(13) 335.221(a)(6)	
4	For permitted units only, are the exhaust gases ducted to the air pollution control system as long as hazardous waste residues remain in the unit?		335.221(a)(6) 266.102(e)(7)(ii)(B)	
	SECTION G: MONITORING AND INSPECTIONS			
1	Has the Regulated Entity monitored feed rates (continuously) and composition (through sampling and analysis) of hazardous waste, other fuels and industrial furnace feed stocks, and feed rates of ash, metals and total chloride/chlorine as necessary to ensure compliance with the certification of compliance or the permit?		266.102(e)(8)(i)(A) 266.103(j)(1)(i) 335.221(a)(14) 335.221(a)(6)	
2	Has the Regulated Entity inspected the boiler/industrial furnace and associated equipment at least daily for leaks, spills, fugitive emissions and tampering?		266.102(e)(8)(iii) 266.103(j)(2) 335.221(a)(14) 335.221(a)(6)	
3	Has the Regulated Entity monitored and recorded the carbon monoxide, oxygen and applicable hydrocarbons levels if complying under Tier II on a continuous basis to ensure compliance with the certification limits or the permit?		266.102(e)(8)(i)(B) 266.103(j)(1)(ii) 335.221(a)(14) 335.221(a)(6)	
4	Has the Regulated Entity tested the automatic waste feed cut off system for operability every 7 days, or at least every 30 days?		266.102(e)(8)(iv) 266.103(j)(4) 335.221(a)(14) 335.221(a)(6)	
5	If the Regulated Entity tested the system every 30 days, did they provide adequate justification for choosing a 30-day schedule?			
6	For each feedstream identified, does the Regulated Entity perform continuous monitoring and recording of the flow rate?		266.102(e)(6) 266.103(a)(6)(iii)(A) 266.103(c)(4)(iv)(A) 266.103(c)(4)(iv)(B) 335.221(a)(11)	

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			335.221(a)(6) 266.103(c)(4)(iv)(C)	
7	Do the continuous monitors continuously sample the flow rate without interruption, evaluate the detector response at least once every 15 seconds and record the average value at least every 60 seconds?		266.102(e)(6) 335.221(a)(11) 335.221(a)(6)	
	SECTION H: RECORDKEEPING			
1	Are records of investigations and monitoring being kept in the operating record until the closure of the facility?		266.102(e)(10) 266.103(k) 335.221(a)(14) 335.221(a)(6)	
2	A residue derived from burning or processing hazardous waste is not excluded from the definition of hazardous waste unless the device meets the requirements stated under 266.112. Does the operating record include complete records associated with handling combustion residues? Reference 265.73; 264.73.		266.102(a)(2)(v) 266.103(k) 335.221(a)(2) 335.221(a)(8)	
3	Does the operating record document dates, times and reasons for any waste feed cutoffs?		266.102(e)(7)(ii) 266.103(g) 335.221(a)(13) 335.221(a)(2)	
4	Interim status only, if a facility is recertifying new conditions, does the operating record include evidence that the allowable 720 waste burning hours have not been exceeded?		266.103(c)(8)(i) 335.221(a)(11)	
	SECTION I: EMISSION STANDARDS			
1	Does the Certificate of Compliance specify emission standards for particulate matter, toxic metals, hydrogen chloride, chlorine, carbon monoxide, hydrocarbons, and dioxins / furans?			
1A	Is the facility compliant with emission standards designated in the Certificate of Compliance for particulate matter?		266.105(a) 335.221(a)(16)	
1B	Is the facility compliant with emission standards for toxic metals?		266.106 335.221(a)(17)	
1C	Is the facility compliant with emission standards for hydrogen chloride?		266.107 266.107(b) 266.107(c) 266.107(e) 335.221(a)(18)	
1D	Is the facility compliant with emission standards for chlorine?		266.107(b) 266.107(c) 266.107(e) 335.221(a)(18)	
1E	Is the facility compliant with emission standards for carbon monoxide?		266.104(b) 335.221(a)(15)	

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1F	Is the facility compliant with emission standards for hydrocarbons?		266.104(c) 335.221(a)(15)	
1G	Is the facility compliant with emission standards for dioxins / furans?		266.104(e) 335.221(a)(15)	
2	Does facility measure stack carbon monoxide and oxygen concentrations using Continuous Emission Monitoring Systems (CEMS) and meet the performance standard in 40 CFR Part 266, Appendix IX, Section 2.1?		266.102(e) 266.102(e)(8)(i)(A) 266.102(e)(8)(i)(B) 266.102(e)(8)(iii) 266.102(e)(8)(iv) 266.104(b) 335.221(a)(15)	
3	Does facility properly calibrate (daily, quarterly, yearly) all CEMS to evaluate and monitor CEMS performance in accordance with 40 CFR Part 266, Appendix IX, Section 2.1?		266.102(e) 266.102(e)(4)(iii)(F) 266.102(e)(8)(i)(A) 266.102(e)(8)(i)(B) 266.102(e)(8)(iii) 266.102(e)(8)(iv) 266.104(b) 335.221(a)(15)	



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